The Effect Of Capital Structure And Firm Size On Firm Value In Pharmaceutical Sub Sector Companies In Indonesia Stock Exchange

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Abstract: The Covid-19 pandemic has triggered changes in the value of companies in the health sector, especially the pharmaceutical sub-sector in Indonesia. This change in the value of the company made returns in the pharmaceutical sub-sector increase significantly. At the same time increases the value of the company. The increase in stock is often associated with the success of the company. The higher the company stock price, the higher value of the company. This study aims to analyze the effect of capital structure on firm value in the pharmaceutical sub-sector on the Indonesia Stock Exchange (IDX) during the 2018-2021 period. The capital structure variables used in this study are long-term debt to equity, Debt to Equity Ratio (DER) and Debt to Asset Ratio (DAR). The sample in this study was 10 pharmaceutical sub-sector companies on the IDX during the 2018-2021 period, with 40 observation periods, namely 10 samples multiplied by four years which were explained using the purposive sampling method. Firm value using Price to Book Value (PBV) acts as a proxy for firm value. Asset value is used as a proxy for company size, as a control variable. Tests in this study used multiple linear regression tests with SPSS. The results of this study indicate that the capital structure has a significant effect on firm value. The size of the company has no significant effect on the value of the company in the pharmaceutical sub-sector on the IDX during the 2018-2021 period.

Keywords: Capital Structure, Long-Term Debt to Equity, Debt to Equity Ratio (DER) and Debt to Asset Ratio (DAR), Company Value, Price to Book Value (PBV)

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Introduction

The Covid-19 pandemic has resulted in changes in the value of companies in the health sector which has made the market value of health sector companies increase significantly, this is reflected in stock returns health sector companies, namely the return on shares of the pharmaceutical sub-sector, increased by 11%. The main goal of the company is to increase the value per business as much as possible in order to maximize the prosperity of the shareholders (Irawan and Kusuma, 2019). The value of the company can describe the perception of investors regarding the level of success of the company. Measurement of the company's value can be done using the Price Book Value (PBV) ratio. Companies that operate optimally in general have a PBV ratio exceeding one (Irawan and Kusuma, 2019). Various factors that have the opportunity to have an impact on the value of the company, for example, namely the capital structure and the size of the business. The capital structure becomes part or the upper structure of the company's liabilities (Kristianti, 2018). Capital structure is also key in improving company performance and productivity (Nadillah et al., 2017; Christiana, 2019).

There are several related meetings, namely Wulan (2018) which explained that the capital structure assessed with DER does not affect the value of the company and the size of the company has a negative and insignificant effect on company value. Tunggal and Ngatno (2018) stated that if the capital structure is reduced using DAR, DER affects the value of the company and then the size of the company has a positive and significant effect on the value of the company. Ainiyah and Sinta (2019) emphasized that the capital structure has a negative effect and the size of the company has a positive and insignificant effect on the value of the company. Irawan and Kusuma (2019) stated that the capital structure does not affect the value of the company and the size of the company has a significant positive effect on the value of the company (PBV). Hidayat's research (2019) suggests that capital structure (DER) negatively affects company value (PBV) and company size has a positive and significant effect on company value (PBV). Another study Octavian et al. (2019) explained that if the size of the deafness has a significant negative effect on the value of the company, the capital structure

does not affect the value of the company, the grouping of dividends a significant positive effect on the value of the company, the capital structure and the size of the company have a positive effect on the value of the company. Research by Anggraini and Siska (2019) explains that the size of the company and the capital structure have a significant negative influence on the value of the company which means that if the value of the capital structure or the size of the company is getting higher, the value of the company will be lower. Meanwhile, the relationship between profitability and the size of the enterprise has no significant effect on the value of the company. Research by Meliani, L.A., and Ariyanto, D. (2021) suggests the capital structure does not affect the value of the company. Research by Novitasari and Krisnando (2021) suggests that if the capital structure has a positive and significant effect on company value, firm size has a negative and significant effect on company value, and the growth of the company has an insignificant negative effect on the value of the company, simultaneously the capital structure, firm size and growth of the company have a significant positive effect on the value of the companies.

The research of Tunggal and Ngatno (2018), Dhin and Pham (2020), Novitasari and Krisnando (2021) found that company size and capital structure have a positive and significant effect on company value. Different results were found by Wulan (2018), Nini et al. (2020), Diep (2020), and Meilani and Ariyanto, (2021) as evidenced that the capital structure did not have a significant effect on the company's value. Referring to a number of these different results, it will be very interesting to examine the capital structure, company value, company size, and the influence of capital structure and company size on the value of the company in the pharmaceutical sub-sector on the IDX. This study applies a number of criteria, namely in the capital structure variables used Debt Equity Ratio (DER), Debt to Asset Ratio (DAR), total company assets and PBV. The thing that distinguishes a number of previous studies from the research carried out today is the subject of the research used, as the similarity of this research with previous research was in the research variables used, namely the capital structure, company size and company value.

Method

This research is a type of causal associative research. This research was carried out using secondary data of publicly listed companies in the pharmaceutical sub-sector on the IDX by accessing the official website, namely www.IDX.co.id. This study was carried out from February to July 2022. The population of this study was 11 pharmaceutical sub-sector companies listed on the IDX from the period 2018 to 2021. The sample determination in this study was carried out using a purposive sampling method with the criteria that the pharmaceutical sub-sector companies listed on the IDX for the period 2018-2021 successively and publish financial reports that have gone through a complete audit for 2018-2021 successively in rupiah. Then obtained 10 companies as samples in this study. The data collection technique in this study was carried out by applying a study of documents from the financial statements (total assets, debt, capital (equity), and net income) of pharmaceutical sub-sector companies from 2018 to 2020 listed on the IDX. A multiple linear regression test is then run to test the hypothesis.

Result and Discussion

1. Description of Research Result

Table 1. Capital Structure Calculation Results (LTD/Equity) for the 2018-2021 Period

Year	Code	LTD (IDR)	Equity (IDR)	LTD/Equity (%)
2018	SIDO	66,634,000,000.00	2,902,614,000,000.00	2.3
2019	SIDO	55,980,000,000,00	3,064,707,000,000.00	1.8
2020	SIDO	67,733,000,000.00	3,221,740,000,000.00	2.1
2021	SIDO	54,415,000,000.00	3,471,185,000,000.00	1.6

Source: Secondary data processed, 2022

Capital structure calculated by long-term debt and then divided by the equity in Table 1 show that SIDO shares have the lowest long-term debt to equity ratio in a row from 2018-2021 in sub pharmaceutical sector, namely 2.3%, 1.8%, 2.1% and 1.6%, which means that SIDO can reduce its long-term debt level every year. The highest long-term debt to equity ratio is in PYFA (PT. Pyridam Farma Tbk.) shares in 2021, which is 231.8%, which means that PYFA's long-term debt is 231.8% higher than its total equity, this is due to there was a significant addition of

long-term debt in 2021, which amounted to Rp361,087,829,322.00 from Rp26,195,065,428.00 in 2020 to Rp873,762,427.00 or in percent increase of 1378%.

Table 2. Capital Structure (LTD/Equity) Period 2018-2021

Year	Code	LTD (IDR)	Equity (IDR)	LTD/Equity (%)
2018	PYFA	34,987,955,657.00	118,927,560,800,000	29.4%
2019	PYFA	38,862,091,498.00	124,725,993,563.00	31.2%
2020	PYFA	26,195,065,428.00	157,631,750,155.00	16.6%
2021	PYFA	387,282,894,750.00	167,100,567,456.00	231.8%

Source: Secondary data processed, 2022

Capital structure (DER) which are calculated through total debt divided by equity refer to Table 3, it can be seen that SIDO shares (PT. Industri Jamu and Pharmacy Sido Muncul Tbk.) have the lowest DER from the 2018-2021 period in the pharmaceutical sub-sector.

Table 3. Capital Structure (DER) 2018-2021 Period

Year	Code	Total Debt (IDR)	Equity (IDR)	Debt/Equity (%)
2018	SIDO	435,014,000,000.00	2,902,614,000,000.00	15%
2019	SIDO	472,191,000,000.00	3,064,707,000,000.00	15.4%
2020	SIDO	627,776,000,000.00	3,221,740,000,000.00	19.5%
2021	SIDO	597,785,000,000.00	3,471,185,000,000.00	17.2%

Source: Secondary data processed, 2022

SIDO shares have the lowest DER ratio from 2018-2021 in the pharmaceutical sub-sector, which is 15%, 15.4%, 19.5%, and 17.2%, although a decrease total debt to equity is not consistent, SIDO can show the best DER ratio in the pharmaceutical sub-sector. The highest DER ratio is in the shares of PYFA (PT. Pyridam Farma Tbk.) in 2021, which is 382.5%.

Table 4. Capital Structure Calculation Results (DER) for the 2018-2021 Period

Year	Code	Total Debt (IDR)	Equity (IDR)	Debt/Equity (%)
2018	PYFA	68,129,603,054.00	118,927,560,800,000	57.3%
2019	PYFA	66,060,214,687.00	124,725,993,563.00	53%
2020	PYFA	70,943,630,711.00	157,631,750,155.00	45%
2021	PYFA	639.121.007.816.00	167,100,567,456.00	382.5%

Source: Secondary data processed, 2022

PYFA's total debt is 382.5% higher than its total equity, this is due to a significant increase in debt in 2021 compared to the addition of its equity, which is Rp568,177,377,105 from Rp70,943,630,711 in 2020 to Rp639,121,007,816 or in percent increase of 800.855%.

Table 5. Capital Structure (DAR) 2018-2021

Year	Code	Total Debt(IDR)	Total Assets(IDR)	Debt/assets (%)
2018	SIDO	435,014,000,000.00	3,337,628,000,000.00	13%
2019	SIDO	472,191,000,000.00	3,536,898,000,000.00	13,4%
2020	SIDO	627,776,000,000.00	3,849,516,000,000.00	16,3%
2021	SIDO	597,785,000,000.00	4,068,970,000,000,00	14,7%

Source: Secondary data processed, 2022

The results of the DAR ratio on SIDO shares (PT. Industri Jamu and Pharmacy Sido Muncul Tbk.) have the lowest DAR ratio from 2018-2021 in the pharmaceutical sub-sector, namely 13%, 13,4%, 16,3%,14,7%,, although the total amount of debt to assets the value is not consistent, but SIDO is able to show the best DAR ratio in this pharmaceutical sub-sector. The highest DAR ratio is in shares of PYFA (PT. Pyridam Farma Tbk.) in 2021

Table 6. Capital Structure (DAR) 2018-2021 Period

Year	Code	Total Debt(IDR)	Total Assets(IDR)	Debt/assets (%)
2018	PYFA	68,129,603,054.00	187.057.163.854,00	36,4%

2019	PYFA	66,060,214,687.00	190,786,208,250.00	34,6%
2020	PYFA	70,943,630,711.00	228,575,380,866.00	31%
2021	PYFA	639.121.007.816.00	806.221.575.272.00	79,3%

Source: Secondary data processed, 2022

The highest DAR on PYFA (PT. Pyridam Farma Tbk.) shares in 2021 was 79.3% this was due to a significant increase in debt in 2021 compared to the addition of its assets, which was ODR 568,177,377,105.00 from IDR 70,943,630. 711.00 in 2020 to IDR 639.121.007.816.00 or a percent increase of 800.855%.

Calculation of firm size is done by applying the company's total assets as a proxy for firm size. The company's assets are processed by logging the value of the firm's assets to become ratio data, namely by using excel with the formula = Ln (assets). While the PBV calculation is done by finding the book values per share, by using the equity value formula, dividing by the number of shares issued by the company, then calculating PBV by applying the share price formula by dividing by the book value per share.

Table 7. Firm value (PBV) 2018-2021 Period

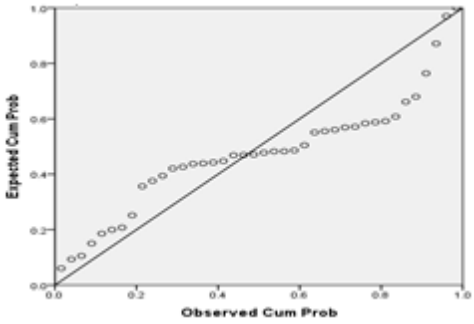
Source: Secondary data processed, 2022

The PBV value in 2018 soared, this was due to a significant increase in INAF's share price, which amounted to IDR 6,500.00/share in 2018, but in 2019 and 2021 INAF's share price decreased significantly, although the PBV

Year	Code	Equity (IDR)	Number of shares	BV/ Shares (IDR)	Stock Price (IDR)	Price/BV (IDR)
2018	INAF	496,646,859,858.00	3,099,267,500	160	6,500,00	40,563
2019	INAF	504,935,327,036.00	3,099,267,500	163	870.00	5,340
2020	INAF	430,326,476,519.00	3,099,267,500	139	4,030.00	29,025
2021	INAF	508,309,909,506.00	3,099,267,500	164	2,230.00	13,597
2018	SCPI	502,405,327,000.00	3,600,000	139,557	29.000,00	0.208
2019	SCPI	617,000.279.000.00	3,600,000	171.389	29.000,00	0.169
2020	SCPI	832,209,156,000.00	3,600,000	231.169	29.000,00	0.125
2021	SCPI	972,552,466,000.00	3,600,000	270,153	29.000,00	0.107

ratio decreased, INAF's shares were the most expensive share in the pharmaceutical sub-sector. SCPI shares (PT. Merck Sharp Dohme Pharma Tbk.) have the cheapest PBV ratios of 0.208, 0.169, 0.125 and 0.107 this is because SCPI's book value per share increases consistently every year from the 2018-2019 period, with a fixed share price (not there is fluctuation). Meanwhile, the most expensive PBV ratio is INAF shares (PT. Indo Farma Tbk.) where the PBV ratio from 2019-2021 is 40,563, 29,025 and 13,597.

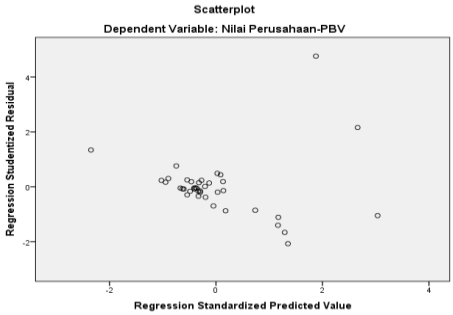
2. Classic Assumption Test



Sources: Secondary data, 2022

Figure 1. Normality Test Results

In the normal probability plots test results, there are a number of points and diagonal lines that do not widen far enough, so data is spread in the normal way.



Source: Secondary data processed, 2022

Figure 3.Heteroscedasticity Tests

Heteroscedasticity tests show that a number of data points spread around the 0 (zero) point both above and below it on the X and Y axes and do not produce special patterns such as piling up or zigzagging, therefore it can be known if there are no symptoms of heteroscedasticity.

Table 8. Autocorrelation Test Results

R	Durbin-Watsons
.635	2.063

Source: Secondary data processed, 2022

The data in this study uses time series data, it can be seen that the DW value is 2,063, which means that there is no autocorrelation.

3. Multiple Linear Regression Test

Table 9. Multiple Linear Regression Test Results

Models		Unstandardized Coefficient B	Unstandardized Coefficient Std. Error	Standardized Coefficient Beta	t	Sig.
1	(Constants)	18.415	23.420		.786	.437
	Capital structure-LTD	-16.527	4.512	-1.007	-3.663	.001
	Capital structure-DER	19.520	4.542	2.287	4.297	.000
	Capital structure-DAR	-42.924	15.113	-1.142	-2.840	.007
	Firm size (SIZE)	-.355	.788	-.060	-.450	.655

Source: Secondary data processed, 2022

The effect of capital structure, where long-term debt/equity (X1), DER (X2), DAR (X3), and firm size (X4) on PBV firm value (Y), is measured by applying a multiple linear regression test. It can be seen from Figure 4.2 Capital Structure, where long-term debt divided by equity (X1), DER (X2), and DAR (X3) have significant effects on the firm's values-PBV (Y) which is reviewed through a significance value lower than 0 0.05, while firm size (X4) at firm's values-PBV (Y) has not given significant effects, which gives a significance result greater than 0.05. In the capital structure, the long-term debt/equity (X1) proxy has a significant negative effect on firm value-PBV (Y), it can be seen from the t-test value of -3.663 and the significance value is lower than 0.05, which is 0.001, while capital structure, with the DER (X2) proxy having a significant positive effect on the firm value-PBV (Y) it can be seen from the t-test value of 4.297 and a significance value of <0.05 which is 0.000, and DAR (X3) has a significant negative effect on the value of company-PBV (Y), it can be seen from the t-test value of -2.840 and a significance value of <0.05 which is 0.007 while firm size (X4) has a negative but not significant effect on the firm value-PBV (Y), this can be reviewed from the t-test value of -0.450 and the significance value exceeds 0.05, which is 0.655.

4. Capital Structure Has Significant Influence on Firm Value

The effect of capital structure proxied by long-term debt divided by equity (X1) and DAR (X3) has a significant negative effect on the value of the PBV (Y) company in the pharmaceutical sub-sector companies on the IDX during 2018-2021, which means the lower the level of debt (long-term debt divided by equity and DAR) hence the firm value (PBV) will increase, and vice versa. These findings are not in line with the Modigliani & Miller

Theory and Trade-Off theory, which states that the capital structure does not affect the value of the firm, and the value of the firm owed is equivalent to the value of the firm that does not owe, in other words, the value of the firm is not determined by how the company synergizes debt and capital. When viewed from the data on the pharmaceutical sub-sector companies using long-term debt on average, it is relatively larger at 33.5% compared to their short-term debt during the 2018-2021 period, this data is obtained by adding up their long-term debt to their equity during the 2018 to 2021 period divided by 40 observation periods, namely 10 samples multiplied by four years. Similarly, the use of total debt as a whole for its assets exceeds 52%, meaning debts are beyond equity, which is 48%, which means that the pharmaceutical sub-sector companies do not apply the pecking order theory, where this theory considers the principle of prudence in using the company's external funds, This theory also explains how companies use a capital structure that focuses on internal equity funding (using retained profits) rather than external funds originating from debt. The rationale for pecking order theory is to describe profitable companies, in general, using low debt so that later the value of the firm will increase, but in pharmaceutical sub-sector companies, the average company uses relatively high, namely long-term debt of 33.5% of its equity. and 52% of total debt to assets. The resulting firm value when viewed from the book value per share is on average IDR 21/share and the average PBV is relatively small. The use of debt lacks leverage at firm value, where a large debt level has a negative effects at firm values during 2018-2021.

The effect of Capital Structure with the DER (X2) proxy has a significant positive effect on the value of the firm-PBV (Y) in the pharmaceutical sub-sector companies on the IDX in 2018-2021, it means that the lower the debt level (DER), the lower the firm value (PBV) Similarly, the higher the level of debt, the higher the value of the firm. These findings are not in line with Modigliani & Miller's Theory and Trade-Off, which state that the value of the firm will not be influenced by the capital structure and the value of the firm that owes is equivalent to the value of the firm that does not owe, in other words, the value of the firm is not influenced by how the company synergizes debt and capital to use it. corporate financing. Data on the pharmaceutical sub-sector companies using total debts, on average, it is relatively large, which is 52% during the 2018-2021 period, this data is obtained by adding up the total debt to assets during the 2018 to 2021 period and then divided 40 observation periods 10 samples multiplied by four years. That means the use of total debt as a whole on its assets is more than 52%, which means the level of debt is higher than equity, which is 48%. Funding that utilizes the capital structure must be reviewed in detail by the company, according to Modigliani & Miller Theory, the determination of the company's capital structures affects company values. While debts can reduce value of taxes. Pharmaceutical firm must be able to apply the trade-off theory, the larger the capitals, the higher the values will be. Which means that it must be able to optimize its capital structure, but company should not take advantage of debt that is too large, because an increasingly large debt will also present a large financial risk for the company.

5. Firm size Has No Significant Effect on Firm Value

The effect of firm size proxied by total company assets after being tested using multiple linear regression tests, firm size does not have a significant effect on firm value in pharmaceutical sub-sector companies on the Indonesia Stock Exchange in 2018-2021. This finding is contrary to empirical research which suggests that firm size is an important and very basic characteristic of a company in many conditions and situations in the company. Big companies tend to be in the spotlight and the center of attention. Large firm size also tends to have financial strength in supporting its business activities and can affect the value of the firm concerned. The size of the company can be assessed by the number of assets the company has in carrying out the company's operational activities and becomes one of the main aspects of financial reporting which will later determine the value of the firm itself. Companies with large total assets make it easier for management to utilize assets in related companies. When viewed from a management perspective, the ease of controlling the company will maximize the level of firm value.

Conclusion

Capitals structures gives significates effects on pharmaceutical sub-sector company values on the IDX at 2018-2021 period. Pharmaceutical sub-sector companies do not apply the pecking order theory, this condition can be seen from the relatively high use of debt during the 2018-2021 period, which is an average of 52% of the composition of the capital structure. With a relatively high debt composition (debt exceeds equity),

pharmaceutical sub-sector companies should be able to apply the trade-off theory, namely debt as leverage and if the company is profitable, it will increase firm value. Company sizes do not give significant effects at values. This research implies to strengthen company values, necessary to focus at the company's capital structures, not firm size. To increase the values, especially pharmaceutical sub-sectors, necessary to focus to the capital structure, especially those from debt.

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